



AGE Smart Vortex Flow Meter

APPLICATION & FEATURES

AGE series smart vortex flow meters are used for measuring the flow of industrial pipeline fluid, such as gas, liquid and steam. The pressure loss is low, has a broad span range and high accuracy. It is not influenced by density, pressure, temperature and viscosity when measuring volumetric flow. It has no movable mechanical parts and has high reliability and low maintenance.

OPERATION PRINCIPLES

An obstruction is placed in the flow of the fluid; regular vortices are generated from the two sides of vortex obstruction. This kind of vortex is called Karman vortex.



Main Technical Data

Standard		Q/320831AHH003-2004 JB/T6807-93
Medium		Gas, liquid, steam
Calibre	Flange holding (clamp-on) type	25, 32, 50, 80, 100, 150, 200, 250, 300
	Flange connection type	100, 150, 200, 250, 300
Measuring Range	Normal range of flow speed	Reynolds number $1.5 \times 10^4 \sim 4 \times 10^6$; gas 5~50m/s; liquid 0.5~7m/s
	Normal range of flow rate	Liquid gas flow range-Table 2 steam flow range-Table 3
Accuracy		Class 1.5
Temperature	Normal temperature High temperature	-25°C~100°C -25°C~150°C -25°C~250°C
Output Signal		Pulse voltage output signal Square wave pulse Current remote signal 4 ~ 20 mA, transmission distance 100m
Environmental Conditions	Temperature:	-25°C~+55°C
	humidity	5~90%
Material		SS, Aluminium Alloy
Power		24 V DC or lithium battery 3.6V
Ex		Exd II BT4
Protection Class		IP65



Table 2: Flow range of liquid, gas under working conditions

Nominal Diameter(mm)	25	32	50	65	80	100	150	200
Liquid (m3/h)	1~10	1.5~18	4~55	6.3~72	9~135	14~200	32~480	56~800
Gas (m3/h)	25~60	15~150	35~350	60~390	90~900	140~1400	300~3000	550~5500

Table 3: Mass flow range of saturated water steam vapour

Absolute Pressure P/Mpa	Unit: (kg/h)													
	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.2	1.4	1.6	1.8	2
Temperature T/°C	120.2	133.5	143.6	151.8	158.9	165.0	170.4	175.4	179.9	188.0	195.0	201.4	207.1	212.4
Density ρ (kg/m ³)	1.129	1.651	2.163	2.669	3.17	3.667	4.162	4.655	5.147	6.127	7.106	8.085	9.065	10.05
DN25 Qmin	14	17	19	22	23	25	27	28	30	33	35	37	40	42
Qmax	140	170	190	220	230	250	270	280	300	330	350	370	400	420
Extendable Max Upper	140	204	267	330	391	453	541	575	636	757	878	999	1120	1242
DN32 Qmin	31	38	44	48	53	57	60	64	67	73	79	84	89	94
Qmax	310	380	440	480	530	570	600	640	670	730	790	840	890	940
Extendable Max Upper	357	522	684	844	1003	1160	1317	1473	1629	1939	2249	2559	2869	3180
DN50 Qmin	52	63	73	81	88	95	101	107	112	122	132	140	149	157
Qmax	520	630	730	810	880	950	1010	1070	1120	1220	1320	1400	1490	1570
Extendable Max Upper	558	816	1069	1320	1568	1813	2058	2302	2545	3030	3514	3998	4483	4970
DN65 Qmin	67.8	99	131	160	180	200	215	220	225	235	245	255	265	275
Qmax	678	990	1310	1600	1800	2000	2150	2200	2250	2350	2450	2550	2650	2750
Extendable Max Upper	900	1326	1741	2134	2535	2733	3330	3724	4117	4902	5685	6470	7252	8038
DN80 Qmin	122	148	170	188	205	221	235	249	261	285	307	328	347	365
Qmax	1220	1480	1700	1880	2050	2210	2350	2490	2610	2850	3070	3280	3470	3650
Extendable Max Upper	1429	2090	2738	3379	4013	4642	5269	5893	6515	7757	8996	10235	11476	12723
DN100 Qmin	175	212	242	269	293	315	336	355	374	408	439	468	496	522
Qmax	1750	2120	2420	2690	2930	3150	3360	3550	3740	4080	4390	4680	4960	5220
Extendable Max Upper	2233	3266	4278	5279	6270	7254	8233	9208	10181	12120	14057	15993	17932	19880
DN150 Qmin	350	423	484	538	586	631	672	711	747	815	878	936	992	1044
Qmax	3500	4230	4840	5380	5860	6310	6720	7110	7470	8150	8780	9360	9920	10440
Extendable Max Upper	5025	7348	9627	11879	14019	16321	15824	20719	22909	27270	31628	35985	40347	44732
DN200 Qmin	700	846	969	1076	1176	1261	1344	1421	1494	1630	1756	1873	1983	2088
Qmax	7000	8460	9690	10760	11730	12610	13440	14210	14940	16300	17560	18730	19830	20880
Extendable Max Upper	8933	13064	17115	21119	25083	29016	32993	36834	40727	48481	56228	63794	71729	79523



IV STRUCTURE & DIMENSION

This series vortex flowmeter has two types of connection forms and dimension

1. Wafer (Clamp-on) Type

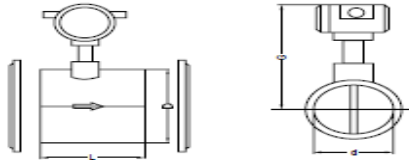


Diagram 3

2. Flange Connection Type

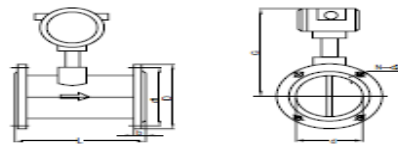


Diagram 4

Dimension of Vortex Flowmeter—flange holding type & flange connection type

Sheet 4

	DN (mm)	Pressure MPa	L mm	G		D mm	dl mm	N-d2	d mm	b mm	Weight Kg
				Normal Temp.	High Temp.						
Wafer Type	25	2.5~4.0	80	342	500	76	-	-	25	-	7
	32	2.5~4.0	80	342	505	76	-	-	32	-	10
	50	2.5~4.0	80	337	515	86	-	-	50	-	12.5
	65	-	80	345	530	102	-	-	65	-	28
	80	1.6~2.5	100	350	540	112	-	-	80	-	25
	100	1.6~2.5	110	330	550	132	-	-	100	-	35
	150	1.6	140	355	575	203	-	-	150	-	40
Flange Conne- tion Type	200	1.6	150	380	600	259	-	-	200	-	46
	100	1.6	250	310	530	125	180	8-Ø18	100	26	30
	150	1.6	300	335	555	280	240	8-Ø23	150	28	34
	200	1.6	320	370	590	335	295	12-Ø23	200	30	41